

CLAIMS

5 1. A method of attempting the creation of a network connection
between a computing device and a network by using a processor capable of
determining bandwidth wherein the method comprises causing the
processor to determine the bandwidth associated with at least a portion of
the network connection that it is desired to make to the computing device
10 from the network and further causing the processor to assess whether this
bandwidth is available from the network before commencing creating the
connection.

2. A method according to claim 1 in which the method is used to hand-
15 over a network connection to the network from an existing network.

3. A method according to claim 2 in which the network connection
between the computing device and at least one of the network and the
existing network comprises at least one channel.
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4. A method according to claim 3 in which the method comprises
causing the processor to determine the bandwidth required by the at least
one of the channels within the network connection.

25 5. A method according to claim 3 in which the method allows some
channels to be maintained with the existing network, whilst other channels
are handed over to the network.

6. A method according to claim 3 in which the method allows some
30 channels to be handed over to the network whilst other channels are
terminated if they are not handed over to the network.

7. A method according to claim 3 in which the computing device ranks the order of importance of the channels to be handed over to the network.
8. A method according to claim 2 in which the method is arranged to
5 hand-over a connection between an existing network and a network each running the same protocol.
9. A method according to claim 8 in which the network is a cellular network and the method is used to hand-over a connection from an existing
10 network comprising a first cell of a network and a network comprising a second, different, cell of that network.
10. A method according to claim 2 which is arranged to hand-over a connection from an existing network to a network operating on a different
15 protocol.
11. A method according to claim 2 in which the bandwidth of connections that exist within the network are restricted in order to allow the network hand-over to take place.
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12. A method according to claim 11 in which the restriction comprises termination.
13. A processing unit arranged to provide a wireless network capable of
25 making at least one data connection to at least one computing device, said processing unit comprising a receiver arranged to receive data specifying the bandwidth requirements for the network connection between the network and a computing device that wishes to join the network, a processor arranged to process data received from the receiver and to
30 determine the bandwidth requirement of a device wishing to join the network, and, if bandwidth is available the processor is further arranged to allocate bandwidth to at least one connection.

14. A processing unit according to claim 13 in which the receiver also provides a receiver of the wireless network.
- 5 15. A computing device capable of connecting to at least one wireless network, said computing device comprising a detector capable of detecting wireless networks and arranged to detect the existence of wireless networks to which the computing device is capable of connecting, a processor capable of determining bandwidth to generate a determined bandwidth and
10 arranged to determine the bandwidth of at least one connection that it is desired to make between the computing device and a network, and a transmitter capable of transmitting determined bandwidth and arranged to transmit the determined bandwidth determined by the processor to a network detected by the detector to which it is possible to make a
15 connection; said computing device further comprising a transceiver capable of establishing a connection to a network and arranged to establish a connection with the network should sufficient bandwidth be available.
16. A computing device according to claim 15 which is capable of
20 connecting to at least two networks operating different protocols.
17. A computing device according to claim 15 which is arranged to transfer at least a portion of an existing connection from an existing network to a network.
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18. A computing device according to claim 17 which is arranged to prioritise portions of the existing connection to the existing network that should be maintained over and above other portions of the existing connection.
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19. A computer network comprising a processing unit capable of providing a network and arranged to provide a wireless network comprising

at least one data connection to a computing device, said processing unit comprising a receiver arranged to receive data from the computing device, the network further comprising a processor arranged to determine bandwidth requirement of a network connection and arranged to determine
5 the bandwidth requirement for further network connections that it is desired to make to the network from one of said computing device and another computing device wishing to join the network, the being further arranged to process data received from said receiver and to allocate a bandwidth to a connection, wherein the processor is arranged to allocate a bandwidth to at
10 least one of the connections.

20. A memory storing instructions, which when loaded on to a computer system cause that computer system to perform the method of claim 1.

15 21. A memory storing instructions, which when loaded on to a processing unit, cause that processing unit to perform as the processing unit of claim 13.

22. A memory storing instructions, which when loaded on to a
20 computing device cause that computing device to perform as the computing device according to claim 15.

23. A memory storing instructions, which when loaded on to a network
cause that network to perform as the network of claim 19.

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24. A method of attempting the creation of a network connection between a device and a network by using a processing arrangement for processing data and being capable of determining the bandwidth of a network connection, wherein the method comprises causing said processing
30 arrangement to determine the bandwidth associated with at least a portion of the network connection that is desired to be made between the device and the network and further causing the processing arrangement to assess

whether the bandwidth is available from the network before commencing creation of the connection to the device.

25. A server arranged to provide a wireless network capable of making
5 at least one data connection to at least one computing arrangement, the
server comprising a receiver for receiving data specifying the bandwidth
requirements of a network connection between the network and a
computing arrangement, and a processing arrangement for processing data,
10 the processing arrangement being arranged to process data received from
the receiver and to determine the bandwidth available on the network, an
allocator for allocating bandwidth to a connection, wherein the processing
arrangement is arranged to control the allocator and further arranged to
cause the allocator to allocate a bandwidth to the at least one data
connection if the bandwidth required to form a connection is available.

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26. A computer capable of connecting to at least one wireless network,
said computer comprising a detector for detecting the existence of wireless
networks to which the computer is capable of connecting, a bandwidth
measurer for determining the bandwidth of one or more connections that it
20 is desired to be made between the computer and a network, and a
transmitter for transmitting the bandwidth determined by the bandwidth
measurer to a network detected by the network detector, said computer
further comprising a transceiver for establishing a connection to a network
if sufficient bandwidth is available.

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27. A method of attempting the hand-over of a network connection to a
network from an existing network, the existing network connection being
with a computing device, the method being performed with a processor
capable of determining bandwidth, the method comprising causing the
30 processor to determine the bandwidth associated with at least a portion of
the network connection that it is desired to make to the computing device
from the network and further causing the processor to assess whether this

bandwidth is available from the network before commencing creating the connection to the network and commencing creation of the connection if bandwidth is available.

- 5 28. A method according to claim 27 in which the network and existing network are each running the same protocol.

29. A method of attempting the hand-over of a network connection to a network from an existing network, the existing network connection being
10 with a computing device and including a plurality of channels, the method being performed with a processor capable of determining bandwidth, the method comprising causing the processor to determine the bandwidth associated with each channel of the network connection that it is desired to hand-over from the existing network to the network and further causing the
15 processor to assess whether this bandwidth is available from the network before commencing creating the connection to the network and commencing creation of the connection for channels of the network for which there is bandwidth available.

- 20 30. A method according to claim 29 which causes the processor to perform one of the following actions for channels for which there is no bandwidth available in the network: terminate channels with the existing network and maintain channels with the existing network.

- 25 31. A method according to claim 29 in which the network and existing network are each running the same protocol.

32. A method according to claim 29 in which the network and existing network are each running a different protocol.

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33. A processing unit arranged to provide a wireless network capable of making at least one data connection including a plurality of channels to at

least one computing device, said processing unit comprising a receiver arranged to receive data specifying the bandwidth requirements for the network connection, including the bandwidth requirements for channels within the connection, between the network and a computing device that
5 wishes to join the network, and a processor, the receiver being arranged to forward data that it receives to the processor and the processor being arranged to (a) process data it receives from the receiver, and (b) determine the bandwidth requirement of a device wishing to join the network, the processor being further arranged to allocate bandwidth to at least one
10 channel if the processor determines that bandwidth is available.

34. A method of attempting the creation of a network connection between a computing device and a network wherein the method comprises determining the bandwidth associated with at least a portion of the network
15 connection that it is desired to make to the computing device from the network and assessing whether this bandwidth is available from the network before commencing creating the connection.

35. A method of attempting the creation of a network connection
20 between a devices and a network, wherein the method comprises determining the bandwidth associated with at least a portion of the network connection that is desired to be made between the device and the network and assessing whether the bandwidth is available from the network before commencing creation of the connection to the device.

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36. A method of attempting the hand-over of a network connection to a network from an existing network, the existing network connection being with a computing device, the method comprising determining the bandwidth associated with at least a portion of the network connection that
30 is desired to make to the computing device from the network and assessing whether this bandwidth is available from the network before commencing

creating the connection to the network and commencing creation of the connection if bandwidth is available.

37. A method of attempting the hand-over of a network connection to a
5 network from an existing network, the existing network connection being
with a computing device and including a plurality of channels, the method
comprising determining the bandwidth associated with each channel of the
network connection that it is desired to hand-over from the existing
network to the network and assessing whether this bandwidth is available
10 from the network before commencing creating the connection to the
network, and commencing creation of the connection for channels of the
network for which there is bandwidth available.